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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
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10/670,403

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Parker J. Voll

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04/05/2006

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EXAMINER

KAPLAN, HAL IRA

ART UNIT

PAPER NUMBER

2836

DATE MAILED: 04/05/2006

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/670,403

Applicant(s)

VOLL ET AL.

Examiner

Hal I. Kaplan

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 24 September 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-35 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-12 and 22-27 is/are rejected.
- 7) ☒ Claim(s) 13-21 and 28-35 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 24 September 2003 is/are: a) ☐ accepted or b) ☒ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
 2. ☐ Certified copies of the priority documents have been received in Application No. _____.
 3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).

* See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|----------------------------------------------------------------------------------------------------|-----------------------------------------------------------------------------|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413) |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | Paper No(s)/Mail Date. _____ |
| 3) <input checked="" type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| Paper No(s)/Mail Date <u>11/21/03, 4/13/05</u> . | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Specification

1. The disclosure is objected to because of the following informalities: Page 13, line 19; page 14, lines 5 and 19; page 18, line 6; page 19, line 7; and page 20, line 9 contain the phrase "electrical cable 130 (FIGs. 1-4)". It appears this should read "electrical cable 130 (FIG. 1)". Page 20, line 10 contains the phrase "feedback leg of a differential driver U6 by a transistor Q6". It appears this should read "feedback legs of a differential driver U6 by transistors Q6 and Q7". Page 20, line 19 contains the phrase "signal-ended". It appears this should read "single-ended". Page 20, line 20 contains the phrase "connector 680 (FIG. 4)". It appears this should read "connector 680 (FIG.6)". Page 21, line 1 contains the phrase "amplifier that form". It appears this should read "amplifier that forms".

Appropriate correction is required.

2. The disclosure is objected to under 37 CFR 1.71(a) because it is not sufficiently enabling.

Page 13, lines 21-22 state that the electrical power signal, with boosted voltage, is passed to modulation/demodulation circuit 520. However, Figure 5 shows the electrical signal, with boosted voltage, being passed to filter circuit 530 without passing through modulation/demodulation circuit 520.

Page 14, lines 16-17 and page 16, lines 21-22 state that the data signal is passed from UART 567 through a data modem 570 and then to modulation/demodulation circuit 520, where it is coupled onto the boosted voltage.

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However, Figure 5 shows the data signal being passed from UART 567 directly to modulation/demodulation circuit 520 (data modem 570 is not shown), and then to filter circuit 530 without being coupled onto the boosted voltage. Similarly, the boosted voltage is shown as being passed to filter circuit 530 without passing through modulation/demodulation circuit 520.

In addition, it is not clear what the distinction is between data modem 570 and modulation/demodulation circuit 520, or why both are necessary, as a modem is a modulator/demodulator.

Claim 32 recites the limitation "compensating for attenuation of the video signal before transmitting the video signal across the second wire pair". This would require the first subsystem to contain an attenuation compensation circuit. However, the specification and drawings disclose an attenuation compensation circuit only in the second subsystem.

Drawings

3. The drawings are objected to under 37 CFR 1.83(a). The drawings must show every feature of the invention specified in the claims. Therefore, the first subsystem comprising an attenuation compensation circuit, as required by claim 32, must be shown or the feature(s) canceled from the claim(s). No new matter should be entered.

4. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they do not include the following reference sign(s) mentioned in the description: 570 in Figure 5 (see page 14, line 16 and page 16, line 22), 551 in Figure 13 (see page 20, line 6), and 651 in Figure 14 (see page 20, line 17).

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5. The drawings are objected to as failing to comply with 37 CFR 1.84(p)(5) because they include the following reference character(s) not mentioned in the description: 231 and 232 in Figures 3 and 4; 431 and 432 in Figure 4; R34, C34, and D3 in Figure 7; R62 in Figure 11; R60, R61, R76, and R79 in Figure 12; R24, R25, R26, R27, R28, R29, R31, R82, C18, and C28 in Figure 13; and R18, C8, C16, Q1, and Q2 in Figure 14. Corrected drawing sheets in compliance with 37 CFR 1.121(d), or amendment to the specification to add the reference character(s) in the description in compliance with 37 CFR 1.121(b) are required in reply to the Office action to avoid abandonment of the application. Any amended replacement drawing sheet should include all of the figures appearing on the immediate prior version of the sheet, even if only one figure is being amended. Each drawing sheet submitted after the filing date of an application must be labeled in the top margin as either "Replacement Sheet" or "New Sheet" pursuant to 37 CFR 1.121(d). If the changes are not accepted by the examiner, the applicant will be notified and informed of any required corrective action in the next Office action. The objection to the drawings will not be held in abeyance.

Information Disclosure Statement

6. The information disclosure statement filed April 13, 2005, fails to comply with 37 CFR 1.98(a)(2), which requires a legible copy of each cited foreign patent document; each non-patent literature publication or that portion which caused it to be listed; and all other information or that portion which caused it to be listed. It has been placed in the application file, but the documents for which copies were not provided, or identified as

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not being available, have not been considered. In addition, the following documents were received but not cited on the information disclosure statement:

"Promoting Camcorders; Camcorder Mfrs & Retailers Try Creative Promotions To Reduce Heavy Inventories," Seavy, Mark, HFD, July 20, 1992.

"Suppliers Play Up Hot New Features, Promos To Spur Summer Sales," Harrington, Mark, HFD, July 20, 1992.

It is not clear to the examiner whether the applicant wishes these documents to be considered.

Claim Rejections - 35 USC § 112

7. The following is a quotation of the second paragraph of 35 U.S.C. 112:

The specification shall conclude with one or more claims particularly pointing out and distinctly claiming the subject matter which the applicant regards as his invention.

8. Claims 8, 22, and 27 are rejected under 35 U.S.C. 112, second paragraph, as being indefinite for failing to particularly point out and distinctly claim the subject matter which applicant regards as the invention.

9. The phrase "substantially similar" in claims 8, 22, and 27 is a relative term which renders the claims indefinite. The phrase "substantially similar" is not defined by the claim, the specification does not provide a standard for ascertaining the requisite degree, and one of ordinary skill in the art would not be reasonably apprised of the scope of the invention. It would not be clear to one of ordinary skill in the art how much in common the third and fourth subsystems must have with the first and second subsystems in order to be substantially similar.

Claim Rejections - 35 USC § 102

10. The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(e) the invention was described in (1) an application for patent, published under section 122(b), by another filed in the United States before the invention by the applicant for patent or (2) a patent granted on an application for patent by another filed in the United States before the invention by the applicant for patent, except that an international application filed under the treaty defined in section 351(a) shall have the effects for purposes of this subsection of an application filed in the United States only if the international application designated the United States and was published under Article 21(2) of such treaty in the English language.

11. Claims 1, 4, 8, 10, 11, and 23 are rejected under 35 U.S.C. 102(e) as being anticipated by the US patent of Flen et al. (6,998,963).

As to claims 1 and 23, Flen, drawn to an endpoint receiver system, teaches, in Figures 1 and 3, a device reading on the claimed distance extender, comprising: an electrical cable (106) electrically coupled between a first device (102) and a second device (104) (see column 5, lines 1-3) and comprising: a first end (see Figure 1); a second end (see Figure 1); and a plurality of wires (302,304,306) extending between the first end and the second end (see column 6, lines 45-49 and Figures 1 and 3); a first subsystem (108) electrically coupled to the first end of the electrical cable (106) and to the first device (102) (see column 5, lines 57-59 and Figure 1); and a second subsystem (112) electrically coupled to the second end of the electrical cable (106) and to the second device (104) (see column 5, lines 60-62 and Figure 1), wherein: the first device (102) or the second device (104) generates a data signal and the first device (102) provides an electrical power signal (see column 5, lines 1-11 and 57-66); the plurality of wires includes a first wire (302) (see column 6, lines 45-49 and Figure 3); and the data

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signal and the electrical power signal are simultaneously transmitted between the first device (102) and the second device (104) over the first wire (302) (see column 2, lines 22-26; column 7, lines 24-27; and Figure 3).

As to claim 4, Flen teaches a switch electrically coupled between the first device (102) and the second device (104) (see column 4, lines 50-52).

As to claim 8, Flen teaches a third subsystem substantially similar to the first subsystem (108); and a fourth subsystem substantially similar to the second subsystem (112), wherein: the third subsystem is electrically coupled between the switch and the fourth subsystem; the fourth subsystem is electrically coupled between the third subsystem and the second device (104); and the switch is electrically coupled between the second subsystem (112) and the third subsystem (see column 4, lines 50-57).

As to claim 10, Flen teaches power to operate at least a portion of the second device (104) being provided only by the electrical power signal (see column 5, lines 5-8).

As to claim 11, the first subsystem (108) comprises a filter circuit (see column 17, lines 45-48 and column 18, lines 10-12).

Claim Rejections - 35 USC § 103

12. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

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13. The factual inquiries set forth in *Graham v. John Deere Co.*, 383 U.S. 1, 148 USPQ 459 (1966), that are applied for establishing a background for determining obviousness under 35 U.S.C. 103(a) are summarized as follows:

1. Determining the scope and contents of the prior art.
2. Ascertaining the differences between the prior art and the claims at issue.
3. Resolving the level of ordinary skill in the pertinent art.
4. Considering objective evidence present in the application indicating obviousness or nonobviousness.

14. This application currently names joint inventors. In considering patentability of the claims under 35 U.S.C. 103(a), the examiner presumes that the subject matter of the various claims was commonly owned at the time any inventions covered therein were made absent any evidence to the contrary. Applicant is advised of the obligation under 37 CFR 1.56 to point out the inventor and invention dates of each claim that was not commonly owned at the time a later invention was made in order for the examiner to consider the applicability of 35 U.S.C. 103(c) and potential 35 U.S.C. 102(e), (f) or (g) prior art under 35 U.S.C. 103(a).

15. Claims 2, 4-6, 24, 25, and 27 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flen in view of the US patent application publication of Schneider et al. (2002/0038334).

As to claim 2, Flen teaches all of the claimed features, as set forth above, except for the data signal comprising at least one of mouse data and keyboard data.

Schneider, drawn to a method and system for intelligently controlling a remotely located computer, teaches, in Figure 1A, an electrical cable electrically coupled between a first device (20) and a second device (120,122,124) and comprising: a first end and a

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second end (see Figure 1A); a first subsystem (50) electrically coupled to the first end of the electrical cable and the first device (20) (see paragraph 31, lines 1-4); and a second subsystem (12) electrically coupled to the second end of the electrical cable and to the second device (120,122,124), wherein: the first device or the second device generates a data signal, and the data signal is transmitted between the first device (20) and the second device (120,122,124) (see paragraph 35, lines 8-11 and paragraph 36, lines 6-8); wherein the data signal comprises at least one of mouse data and keyboard data and is transmitted from the first device (20) to the second device (120,122,124) and from the second device (120,122,124) to the first device (20) (see paragraph 35, lines 8-11 and paragraph 36, lines 6-8). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to use the device of Flen in a computer system like that of Schneider, using the computer's internal power supply instead of the distribution substation and the cable as the distribution line, because only one cable would be needed to transmit both data and electrical power instead of two.

As to claim 4, Schneider teaches a switch (74a) electrically coupled between the first device (20) and the second device (120,122,124) (see paragraph 25, lines 14-15; paragraph 31, lines 1-4; and Figure 1A).

As to claims 5, 24, and 27, the switch (74a) of Schneider is a keyboard, video, and mouse switch (see paragraph 34, lines 1-3 and Figures 1A and 1B).

As to claim 6, the switch (74a) of Schneider is electrically coupled between the first device (20) and the first subsystem (50) (see Figure 1A).

As to claim 25, the second subsystem (12) of Schneider is electrically coupled between the first subsystem (50) and the operator control center (120,122,124) (see Figure 1A).

16. Claims 3 and 9 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flen in view of the US patent of Clark (7,015,397).

As to claim 3, Flen teaches all of the claimed features, as set forth above, except for the first wire forming a portion of a first wire pair and the data and electrical power signals being simultaneously transmitted between the devices over a first wire pair. Clark, drawn to multi-pair communication cable using different twist lay lengths and pair proximity control, teaches, in Figure 2a, a cable comprising a first wire pair (40) (see column 3, lines 39-43). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to build the device of Flen with the cable of Clark, in order to more reliably meet the Category 5 or 6 performance standards.

As to claim 9, the cable of Clark comprises four unshielded twisted wire pairs (40,42,44,46); and the first wire (40) is a portion of one of the four unshielded twisted pairs (40) (see column 3, lines 39-43 and Figure 2a).

17. Claims 7 and 26 are rejected under 35 U.S.C. 103(a) as being unpatentable over Flen in view of Schneider, and further in view of the US patent application publication of King et al. (2003/0131127).

As to claim 7, Flen in view of Schneider teach all of the claimed features, as set forth above, except for the switch being electrically coupled between the second subsystem and the second device. King, drawn to a KVM video & OSD switch,

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teaches, in Figure 1, a KVM switch (12), electrically coupled directly to a keyboard, video monitor, and mouse (see paragraph 20, lines 5-9 and paragraph 23, lines 1-2). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to build the device of Flen in view of Schneider, with the switch electrically coupled directly to the keyboard, video monitor, and mouse (second device) and therefore between the second device and the second subsystem, as taught by King, in order to more rapidly and efficiently switch between operator control center and remote computer data for display on the operator control center video monitor.

As to claim 26, the first subsystem (50) of Schneider is electrically coupled between the computer (20) and the second subsystem (12) (see Figure 1A).

18. Claim 12 is rejected under 35 U.S.C. 103(a) as being unpatentable over Flen in view of the US patent of Zamat et al. (5,983,085).

As to claim 12, Flen teaches all of the claimed features, as set forth above, except for the second subsystem comprising a voltage conversion circuit and an attenuation compensation circuit. Zamat, drawn to a method and apparatus that compensates for output power variations in a transmitter by using scaling factors to scale the baseband input signal, teaches, in Figures 1, a transceiver comprising a voltage conversion circuit (12) and an attenuation compensation circuit (20) (see column 3, lines 7-9 and column 4, lines 17-28 and 32-37). It would have been obvious to one of ordinary skill in the art, at the time of the invention, to build the device of Flen using the transceiver of Zamat as the second subsystem, in order to reduce cost and use fewer components.

Allowable Subject Matter

19. Claims 13-21 and 28-35 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

20. The following is a statement of reasons for the indication of allowable subject matter:

Claims 13-21 contain allowable subject matter because none of the prior art of record teaches or discloses the generation and transmission of a plurality of video signals, in combination with all of the remaining claimed features.

Claims 28-35 contain allowable subject matter because none of the prior art of record teaches or discloses the step of boosting the electrical voltage signal prior to transmission, rather than stepping it down, in combination with the remaining claimed features.

Conclusion

21. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. US patent application publications of Watanabe et al. (2001/0032275), Cern et al. (2002/0027496), Leete (0204/0225804), and Flen et al. (2005/0017849 and 2005/0055586) teach similar devices.

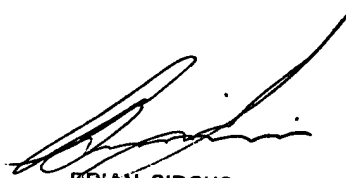
Any inquiry concerning this communication or earlier communications from the examiner should be directed to Hal I. Kaplan whose telephone number is 571-272-8587. The examiner can normally be reached on M-F 8:30-5:00.

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Brian Sircus can be reached on 571-272-2800 x36. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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